BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

IN RE APPLICATION NO. 96-1	)
	)
OLYMPIC PIPE LINE COMPANY:	)
CROSS CASCADE PIPELINE PROJECT	)
	)
	)

EXHIBIT _____ (KC - RT4)

REBUTTAL TESTIMONY OF KATY CHANEY

ISSUE: FISH, WILDLIFE AND ENDANGERED SPECIES

SPONSOR: OLYMPIC PIPE LINE COMPANY

R. State your name.

A. Katy Chaney

Q. What topics will you address in your rebuttal testimony?

A. My rebuttal testimony is intended to respond to all of the testimony filed concerning environmental or land use impacts related to the project, and the mitigation of those impacts. My rebuttal testimony will address the following topics:

(1) Olympic's approach to environmental assessment and mitigation;

(2) Visual Impacts;

(3) Noise Impacts;

(4) Geotechnical hazards;

(5) Stream Crossings, Water Quality and Water Resources:

(6) Fish, Wildlife and Endangered Species

(7) Wetlands and Vegetation;

(8) Recreation;

(9) Land Use, including Agriculture.

For the Council's convenience, my rebuttal testimony has been divided into several different exhibits, organized roughly according to the likely organization of the adjudicatory proceedings. This exhibit addresses fish, wildlife and endangered species.

Fish

Q. Has Dames & Moore evaluated the potential impact of the project on fishery resources?

A. Yes. Dames & Moore prepared an initial report fisheries report, and then updated the report in response to the Jones & Stokes EIS Comments (Jones & Stokes, 1996 and 1997) on Fisheries and Aquatic Resources. Additionally, the report addresses comments from the U.S. Fish and Wildlife Service (Fish & Wildlife Service, 1997), North Bend Ranger District of the Mount

Baker-Snoqualmie National Forest (U.S. Forest Service, 1997) and U.S. Army Corps of Engineers (Corps of Engineers, 1997).

Q. What is the focus of the technical report?

A. The focus of this fisheries investigation is on salmonids (salmon and trout) because of their economic, cultural, and biological importance. Most of the potential impacts of this project to aquatic resources would be to salmonids. These species have a well-documented sensitivity to a wide range of environmental stresses and are located near the top of the aquatic food chain. Dames & Moore, therefore emphasized streams that support anadromous salmon or trout species in this report.

Q. What data sources were included in the preparation of the report?

A. Dames & Moore reviewed numerous data sources for fisheries information to prepare both the EFSEC Application and the technical report. These sources include information from the United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Washington Department of Fish and Wildlife (WDFW), and Washington Department of Natural Resources (WDNR) was reviewed. Databases from the Washington Department of Fisheries (WDF) stream catalog (Williams et al., 1975), the Washington Rivers Information System (WARIS: WDFW, 1995a), Washington Department of Natural Resources Data96, and the Pacific States Marine Fisheries Association (PSMFA, 1995) were also analyzed to obtain information on fish utilization, distribution, and other data.

Q. How did you decide on the survey procedure to be used for the report?

A. Much of the survey procedure was based on the WARIS information (WDFW, 1995a). This database, developed by WDFW, is the standard database for fisheries information. For Dames & Moore, all of the data sources were used to identify the waterways that would be crossed by the proposed pipeline and the aquatic resources at, and downstream, of each crossing. The

databases were also used for information on sensitive species, hydrology, and other issues of concern.

Q. Were field surveys performed?

A. Yes. Initial field surveys were performed during August 1995, and focused primarily on the potential waterway crossing locations to determine the presence and types of fish habitat areas. For each large stream crossing that had surface flow, field forms were filled out for both habitat characteristics and channel stability. General field notes were recorded for other waterways. The date that each stream was surveyed is recorded in Table 4 of the technical report. This listing records the date of each survey and if a survey form was filled out. The field forms were modified from EPA Rapid Bioassessment Protocols (EPA, 1989) for evaluating fish and habitat conditions and are included in Appendix B to the report.

The WARIS data indicated that there were approximately 156 waterways that would be crossed by the pipeline. During field surveys in August 1995, Dames & Moore also identified seven additional waterways and they were inventoried. All of the waterways (163 total) were mapped in the EFSEC Application Map Atlas (Appendix A of Dames & Moore, 1996a). Additional waterways were added in 1996 from another database (Data96) from the Washington Department of Natural Resources to bring the total number of pipeline waterway crossings along the proposed route to 285. Nine streams, not on Data 96 have been added (for a total of 294).

Q. What waterways did the survey focus on?

A. The initial fisheries surveys focused on the larger, named waterways. The surveys focused on the waterways that had potential fishery resources at the pipeline crossing locations, or the streams that could directly affect downstream reaches. Less important waterways, such as the numerous irrigation canals along the eastern portion of the pipeline alignment, were not surveyed. Accordingly, the potential project impacts to the fishery resources were based on the waterways expected to have fisheries resources.

Table 5 of the report lists 144 specific waterway crossings that are evaluated for their fish utilization value . The 132 project streams containing fish are evaluated in Table 5 for salmonid habitat, potential impact area, stream sensitivity index, and the proposed crossing methods. An additional 12 streams which do not contain fish at their crossings are included due to the downstream presence of fish or the proximity of the crossing to a stream that contains fish. These crossings included all of the major streams along the pipeline route indicated by WARIS (WDFW, 1995a), and additional streams that were located during the field surveys.

After the fisheries surveys were completed and the original EFSEC Application submitted, the WARIS information was more thoroughly reviewed. Several problems were identified in the database. The WARIS data are based on 1:100,000 scale maps and many project waterway crossings were not included. Also, fisheries and hydrology data were not available for the many of the project streams.

Q. What did you do to address the problems with the database?

A. To address the need for a more complete inventory of the project streams, Dames & Moore obtained another database (Data96) from the Washington Department of Natural Resources. The database is based on 1:24,000 scale hydrography with some photogrammatic interpretation, and all channels identifiable from map and photo resources with a defined bed and bank were identified. Even though the database does not have information on fishery resources, it identified most of the potential waterways that may be crossed by the pipeline (285 waterways on the proposed pipeline and an additional 36 on alternate routes). Most of the route has been walked and channels not identified from available databases have been added.

The DNR Data96 database indicated that there are 285 project waterways that could be crossed by the pipeline. Nine streams, not on Data 96 have been added from field surveys (for a total of 294). An additional 36 project waterways could be crossed on alternate pipeline routes. Table 3 of the technical report lists all species of fish present in project waterways by stream

crossing. Table 4 lists all project streams, their fisheries utilization, whether salmonid habitat is present, stream sensitivity index, if crossing occurs in an established corridor, fisheries survey date, and the proposed crossing methods. Potential impact area of streambed construction is listed in Table 5. Of the streams crossed, 132 are known to contain fish. Six streams that do not rear fish are crossed in close enough proximity to a stream that contains fish that construction could affect downstream fish habitat.

Q. Did Dames & Moore then perform additional survey work?

A. Yes. Dames & Moore conducted additional fisheries field surveys from March to July 1996, to inventory more waterways. Most irrigation canal crossings and many small waterways along the pipeline route were surveyed. Fourteen of the waterways identified in Data 96 have not been surveyed, but data have been collected on the important project streams. Crossings 44 through 117 were surveyed again during August 1997 to obtain additional information on fish presence and sedimentation impacts.

The DNR Data96 waterways were mapped and are displayed in Appendix A of the report. Data96 assumes that any channel identified from aerial photo interpretation is a waterway. Essentially all of the watercourses in the list of crossings have been field-verified by Dames & Moore. Additional small drainages containing intermittent or ephemeral streams not located on maps and photos or field surveys may still exist, although the number is expected to be very small if any, due to the amount of field work already performed..

Q. Do you believe that you have surveyed all of the streams where fish may occur?

A. As noted above, it is reasonable to assume that a limited number of small channels containing intermittent or ephemeral streams that have not been located on databases or field surveys may be found prior to construction. Crossing methodologies appropriate to the site will be chosen and approved by the appropriate agencies. Methodologies creating the lowest level of impacts will

be used wherever possible. In most cases, these channels will probably conduct only a small volume of water, if any, on a seasonal basis and have little, if any, significant fishery value.

Q. In addition to the database information, did you also contact any agency personnel?

A. Dames & Moore obtained further information about fish species in the project area, including sensitive species, through telephone interviews with Kurt Kraemer and Bob Pfeiffer at the WDFW Mill Creek Office, Erik Anderson, Jim Cummings, Keith Wolf and Erik Eartrand at the WDFW Yakima Office, Greg Burley and Paul Mongillo at WDFW Olympia, Erik Larsen at the Washington DNR, Lynn Hatcher at Yakima Tribe Fisheries Department and Greg Huckle at the U.S. Fish and Wildlife Service. Information was obtained in person from Sean Farrell at the USFS-Cle Elum District, Tyler Patterson at the USFS-North Bend District and Gary Sprague, WDFW-Olympia. Information was also obtained in writing from Tyler Patterson and Sean Farrell at the USFS Districts mentioned above and Kurt Nelson at the Tulalip Tribes Fisheries Department.

Q. Does the report also address impacts to Threatened or Endangered Species?

A. Yes, the technical report addresses potential impacts to bull trout, pygmy whitefish, Columbia and Yakima Basin Steelhead Trout, and Spring-Run Chinook.

Q. Are there other Dames & Moore witnesses who have additional information on the fisheries report and surveys?

A. Yes, Dr. Robert Nielsen of Dames & Moore can provide additional information on fishery resources. He is also filing rebuttal testimony addressing this issue.

Wildlife

Q. Did Dames & Moore perform an assessment of the presence of and potential effects upon wildlife in the vicinity of the proposed pipeline?

A. Yes. As described in Section 3.4.3 of the Application, wildlife species records and distributions along the pipeline route were gathered from publications and inventory information

from the Washington Natural Heritage Program, U.S. Fish and Wildlife Service, U.S. Forest Service, and Department of the Army (Yakima Training Center Staff). Field work provided some site specific information, and published field guides and related studies provided additional background information. Vegetation mapping was based on aerial photograph interpretation, and agency GIS coverages (old-growth mapping in the study area relied heavily upon the Washington Department of Fish and Wildlife Priority Habitats and Species coverage) with field verification. Since linear projects such as the Cross Cascade Pipeline affect only a narrow slice of many habitats and populations, we addressed density and distribution with reference to the larger habitats and populations. Habitats are mapped and described and specific distributions of special status species are addressed in Section 3.4.3. Densities of populations are discussed in this same section of the Application in terms of published information and limited field observations.

Over an entire year, approximately 320 species of wildlife are likely to occur in habitats traversed by the pipeline corridor (see Appendix B of the Application for species list). Sixteen species of amphibians potentially occur in aquatic, riparian, wetland, and upland habitats in the study area. Fifteen species of reptiles potentially occur in aquatic and terrestrial habitats within the corridor. There are 224 species of birds that may occur within habitats in the study area as permanent year-round residents, breeding season residents, spring/fall migrants, and/or winter residents. A total of 32 species of mammals may occur in habitats traversed by the project. Small mammals, including rodents, shrews, bats, and rabbits are the most numerous, although they are not readily observed. Large mammals include deer, elk, coyotes, and black bears.

Q. Have your reviewed the testimony of Eric Anderson (F&W), Ron Friesz (F&W), Tony Opermann (F&W), Brent Renfrow (F&W) and Gray Sprague (F&W) regarding potential wildlife impacts of the project?

A. Yes. Most of these witnesses focus on fish issues, which I addressed above, rather than wildlife issues. To the extent that they address wildlife issues, they are generally in the context of

discussions concerning impacts to wetland habitat or other vegetation I have addressed issues concerning wetlands and vegetation in another portion of my rebuttal testimony.

Endangered Species

Q. Has a Biological Evaluation been prepared for this project?

A. Yes. Dames & Moore prepared a Biological Evaluation and submitted it to the U.S. Forest Service (USFS) for review. The evaluation included both a pre-field review and field surveys. A copy of the Biological Evaluation is provided as Exhibit KC-4.

Q. Could you explain what you mean by a pre-field review?

A. The pre-field review include agency consultation to ensure that applicable protocols, paperwork, and standards and guidelines are followed on federal land. Dames & Moore and Olympic staff members met with the USFS and discussed procedures for field survey and documentation. The USFS provided species lists, reference materials, and examples of report write-up formats. Dames & Moore and the USFS met in the field to discuss and identify the least environmentally damaging alignment on USFS land. USFS review of reports will ensure that all relevant guidelines and standards are followed. Dames & Moore has consulted with and received information from the U.S. Army (for Yakima Training Center land), the Bureau of Land Management, the Bureau of Reclamation, and the U.S. Fish and Wildlife Service (USFWS) to ensure that all applicable procedures are followed. Dames & Moore biologists reviewed publications, aerial photographs, and maps to assess the expected plant community and wildlife habitat types in the study area. The USFWS and the Washington Departments of Fish and Wildlife (WDFW) and of Natural Resources (WDNR) were contacted for information on threatened and endangered species and priority habitats and species potentially occurring in the project study area. The Natural Heritage Data Systems (NHDS) were searched for documented occurrences of status species in the project area. Local biologists with the WDFW and USFS were contacted to confirm specific information on special status species in the project area.

Q. How did you use the information from these agencies to decide which species to survey for in the field?

A. The animal species were selected based on information available from the USFWS, WDFW, WDNR, and Mount Baker/Snoqualmie and Wenatchee National Forests. The Columbia pebblesnail, the lynx, and the sharp-tailed grouse are not found in the project area. The Columbia pebblesnail still survives in the Hanford Reach area but it is no longer found where the project crosses the Columbia. The lynx occurs in isolated areas in the Okanogan Highlands and in the northeastern Cascades. Its occurrence in the project areas would be considered very rare. The current range for the sharp-tailed grouse is limited to the Okanogan valley, northern Douglas County, and central Lincoln County (Smith et al. 1997). These species occurring beyond the range of the project were not covered in the Biological Evaluation. Suitable habitat for the long-horned leaf beetle will not be affected by the project. The Biological Evaluation nonetheless addresses this species because it occurs in the range of the project.

Q. Was information also collected on fishery resources?

A. Yes. Current fish distribution information was gathered from agency contacts and files of the USFWS, National Marine Fisheries Service (NMFS), WDFW, and WDNR, and from the following databases: the Washington Department of Fisheries (WDF) stream catalog (Williams et al. 1975), the Washington Rivers Information System (WARIS: WDFW 1995), Washington Department of Natural Resources Data96, and the Pacific States Marine Fisheries Association (PSMFA 1995).

Q. What information was collected on rare plants?

A. In addition to database requests from the resource agencies, WNHP publications were reviewed to determine which rare plants had the potential to occur along the proposed route based on distribution and habitat requirements. The following publications were used:

- Endangered, Threatened & Sensitive Vascular plants of Washington (WNHP 1994);

- An Illustrated Guide to the Endangered, Threatened and Sensitive Vascular Plants of Washington (WNHP 1981); and
- Flora of the Pacific Northwest (Hitchcock and Cronquist 1973).

USFS provided Dames & Moore with a list of sensitive plant species for both the Mt.Baker-Snoqualmie and Wenatchee National Forests as well as USFS publications pertaining to sensitive plant species. The Yakima Training Center (YTC) provided Dames & Moore with a list of species of concern on YTC land. Dames & Moore also reviewed YTC rare plant maps and reports prior to conducting rare plant studies. The Bureau of Land Management (BLM) uses state listed information provided by the Natural Heritage Program for rare plant surveys.

The list of rare plant species generated from the preliminary data evaluation was used as a guide in the field. This list includes federal and state listed threatened and endangered species, federal candidate species, federal species of concern, state sensitive species, and Forest Service Region 6 sensitive species from the Mt. Baker-Snoqualmie and Wenatchee National Forests. In addition, a sensitive plant species list provided by the Yakima Training Center was used while on YTC land. The list of species included in the survey is presented in Appendix B of the Biological Evaluation. This list was prepared prior to conducting any rare plant surveys. Federal listings for candidate species have changed since this list was originally prepared. This list includes plants which were listed as candidates when field work was originally conducted (although many of these species are no longer listed as federal candidates).

Q. After reviewing all of the pre-field survey information, what field surveys were then conducted?

A. Field surveys were conducted in the project area following USFS protocol for two Survey & Manage species: Larch Mountain Salamander and Van Dyke's Salamander. Opportunistic surveys were conducted for Survey & Manage mollusks during salamander surveys. The need

for additional surveys is not anticipated, as no potential habitat (old growth) will be affected by pipeline construction.

Q. Were there T&E species for which you did not conduct surveys, and why?

A. Surveys were not conducted for the following species for the stated reasons:

Suitable habitat is available and/or sightings are on record, but the project does not affect suitable habitat.

Black-backed Woodpecker	Northern Goshawk
Common Loon	Northern Spotted Owl
Flammulated Owl	Pacific Fisher
Gray Wolf	Pileated Woodpecker
Grizzly Bear	Townsend's Big-eared Bat
Johnson's Hairstreak	Vaux's Swift
Lewis' Woodpecker	White-headed Woodpecker
Marbled Murrelet	Wolverine

Suitable habitat is available and/or sightings on record, but mitigation and conservation measures will avoid impacts to suitable habitat or species.

American Peregrine Falcon	Sage Grouse
Bald Eagle	Sage Sparrow
Columbia Spotted Frog	Sage Thrasher
Ferruginous Hawk	Sandhill Crane
Golden Eagle	Washington Ground Squirrel
Loggerhead Shrike	Western Burrowing Owl
Northern Leopard Frog	

Q. Were surveys also conducted for fish?

A. Yes, fish and fish habitat surveys were conducted along the pipeline corridor in August 1995, from March through July 1996, and in August 1997.

Q. What surveys were conducted for rare plants?

A. Rare plant surveys were conducted based on the plant species presented in Appendix B of the Biological Evaluation. Biologists used aerial photographs and/or topographic maps to guide the survey and map rare plant locations. The biologists walked the above-listed areas in a meandering or "zig-zagging" path while surveying the study corridor (200' swath centered on the proposed pipeline). This method ensures that the proposed construction corridor is adequately surveyed. The Biological Evaluation documents rare plant locations for endangered, threatened, candidate, and sensitive plant species only.

Q. When were the plant surveys conducted, and where along the route did they occur?

A. Rare plant surveys were conducted in the following areas along the pipeline route during 1996, 1997, and 1998:

- shrub-steppe habitats (vicinity of Yakima River to the end of the route);
- forest habitats on Bureau of Land Management and Forest Service (Mt. Baker-Snoqualmie National Forest and Wenatchee National Forest) land; and any other areas outside of existing easements or trails that consist of natural, non-weedy vegetation (these route segments are identified in Appendix A (Map Atlas) of the EFSEC application as "New Corridor").

Q. Were there places along the corridor where rare plant surveys were not conducted?

A. Rare plant surveys were not conducted in places where rare plants would not be expected to occur. This includes such areas as the Bonneville Power Authority (BPA) rights-of-way in western Washington. These BPA easements are dominated by weedy species such as blackberry (*Rubus* spp.). Areas of roadside vegetation composed of weedy vegetation were also eliminated from rare plant surveys. Surveys were also not conducted in places where rare plants would not

be affected by the project. There are some route segments in which OPL will not affect vegetation adjacent to already cleared areas. Since the adjacent vegetation will not be disturbed by construction and operation of the pipeline, rare plant studies were not conducted. This includes such areas as the portion of the alignment on the Cedar Falls Trail, Homestead Valley Road, and Snoqualmie Pass Tunnel. No surveys were conducted for Forest Service Survey and Manage nonvascular plants because the project will not affect these species or their required habitat.

Q. Are there other Dames & Moore witnesses who have additional information on these surveys?

A. Yes. Dr. David Every of Dames & Moore directly supervised the survey work for the wildlife species and plants, and Dr. Robert Nielsen of Dames & Moore can provide additional information on fishery resources. Both have filed rebuttal testimony concerning these issues.

DATED: March 24, 1999

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Katy Chaney